



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,245	12/02/2003	Simon Robert Walmsley	PEA04US	4557
24011 7590 05/31/2007 SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			EXAMINER UHLENHAKE, JASON S	
			ART UNIT 2853	PAPER NUMBER
			MAIL DATE 05/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/727,245

Applicant(s)

WALMSLEY ET AL.

Examiner

Jason Uhlenhake

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Madeley (U.S. Pat. 6,637,860) in view of Teshigawara et al (U.S. Pub. 2002/0171709)

Madeley discloses:

- ***regarding claim 1***, a plurality of printing nozzles spanning a respectively different printing width (different nozzle count), the printhead modules being disposed adjacent each other to define a page width printhead (Column 1, Lines 38-40; Lines 59-64; Column 7, Lines 32-43)

Madeley does not disclose expressly the following:

- ***regarding claim 1***, a printer controller for supplying dot data to a printhead in a predetermined order comprising at least first and second printhead modules
- order and time supply of the dot data to the printhead modules such that the difference in the printing widths of the printhead modules are at least partially compensated for

Teshigawara discloses:

- **regarding claim 1**, a printer controller (200) for supplying dot data to a printhead in a predetermined order comprising at least first and second printhead modules (Figure 4), (Figure 4; Paragraph 0050)
- order and time supply (predetermined processing) of the dot data to the printhead modules such that the difference in the printing widths (Figure 4) of the printhead modules are at least partially compensated for (Controller 200; Paragraphs 0037, 0041, 0043, 0048-0049)

Claims 2, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madeley (U.S. Pat. 6,637,860) as modified by Teshigawara et al (U.S. Pub. 2002/0171709) as applied to claim 1 above, and further in view of Hackleman et al (U.S. Pat. 5,719,602).

Madeley as modified by Teshigawara discloses all of the claimed limitations except for the following:

- **regarding claim 2**, a printhead modules comprise a plurality of rows of the printing nozzles, the controller being configured to supply the dot data to the rows of nozzles in serial form
- **regarding claim 3**, a controller configured to serially supply the data to a first row of nozzles , the data being serially clocked through the first for of each pair of rows, then through a second row of each pair of rows, until all printhead nozzles have received their respective data.

Hackleman et al discloses the following:

Art Unit: 2853

- **regarding claim 2**, a printhead modules comprise a plurality of rows of the printing nozzles, the controller being configured to supply the dot data to the rows of nozzles in serial form (Column 5, Lines 34-57) for the purpose of controlling the firing of printhead nozzles as a function of media speed.

- **regarding claim 3**, a controller configured to serially supply the data to a first row of nozzles , the data being serially clocked through the first for of each pair of rows, then through a second row of each pair of rows, until all printhead nozzles have received their respective data. (Column 5, Lines 34-57) for the purpose of adjusting nozzle time to print, thus the time to complete a print job is less.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Hackleman into the device of Madeley as modified by Teshigawara, for the purpose of increasing the speed of printing.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Madeley (U.S. Pat. 6,637,860) as modified by Teshigawara et al (U.S. Pub. 2002/071709) and Hackleman et al (U.S. Pat. 5,719,602) as applied to claim 1 above, and further in view of Kamoshida et al (U.S. Pub 2002/0075339).

Madeley as modified by Teshigawara and Hackleman et al discloses all of the claimed limitations except for the following:

- **regarding claim 4**, data is clocked through the second row in a direction substantially opposite to that in which it was clocked through the first row

Kamoshida et al discloses the following:

- **regarding claim 4**, data is clocked through the second row in a direction substantially opposite to that in which it was clocked through the first row (Paragraphs 0005, 0011).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of data clocked through the second row in a direction substantially opposite to that in which it was clocked through the first row as taught by Kamoshida et al into the device of Madeley as modified by Teshigawara and Hackleman et al, for the purpose of improving the efficiency of the printing mechanism and thus improving the quality of printing.

Response to Arguments

Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection. Please see the above rejection regarding Madeley (U.S. Pat. 6,637,860) in view of Teshigawara et al (U.S. Pub. 2002/0171709). Madeley discloses printhead modules being disposed adjacent each other to define a page width printhead.


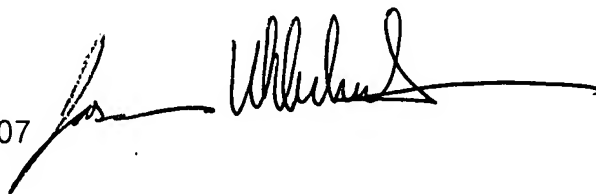
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSU
May 21, 2007



STEPHEN MEIER
SUPERVISORY PATENT EXAMINER